

Annotated Checklist of Indian *Elasmus* (Hymenoptera: Chalcidoidea : Eulophidae) with a New Synonymy

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ABSTRACT

Here we present an annotated checklist of *Elasmus* from Indian region. The list is based on published literature and survey collection under state fauna series of zoological survey of India. It comprises total of 58 species of *Elasmus* Westwood, 1833 is given together with the Indian records in different states and Union territory of India. Besides the original combination, citation of the original description and type locality of each species is presented. *Elasmus nigricoxa* Prakash and Verma is probably a junior synonym of *Elasmus punensis* Mani and Saraswat.

Key words: *Elasmus*, Elasmini, Chalcidoidea, India, biogeography.

INTRODUCTION

The tribe Elasmini contains only genus *Elasmus* (Eulophidae, Eulophinae), based on molecular studies and DNA analyses of Eulophidae and Elasmidae, genus *Elasmus* has been reduced to a tribe of the subfamily Eulophinae, formerly classified as a separate family, Elasmidae (Gauthier *et al.* 2000). The genus contains over 258 species worldwide (Noyes, 2016). The Indian species of the genus *Elasmus* were reviewed by Verma *et al.*, 2002 and Narendran *et al.*, 2008. This genus is mostly primary parasitoids of the larvae of Lepidoptera or hyperparasitoids on them through various Hymenoptera, in particular the Ichneumonidae and Braconidae. Some species develop regularly both as primary and hyperparasitoids and are usually gregarious.

The present paper contains a checklist of 58 species of *Elasmus* distributed in different states and Union territory of India. Original combination, type locality and synonymy of each taxon are given. *Elasmus nigricoxa* Prakash and Verma is probably a junior synonym of *Elasmus punensis* Mani and Saraswat.

MATERIAL AND METHODS

The species are arranged in alphabetical order. The present checklist is reasonably completed to end of September 2016. The references given here are mainly to indicate the published literature consulted in extracting information on species described or recorded from the localities. The following abbreviations used in the text: BMNH - The Natural

History Museum, London, DZAMU - Department of Zoology, Aligarh Muslim University, Aligarh, India, DZUC - Department of Zoology, University of Calicut, Kerala, India, QMB - Queensland Museum, Brisbane, USNM - The U. S. National Museum, Washington, D.C., ZSIC, Zoological Survey of India Calicut, ZSI, Zoological Survey of India, Kolkata.

RESULTS

Genus *Elasmus* Westwood, 1833

Elasmus Westwood, 1833: 343 [Type species *Elasmus flabellatus* Fonscolombe, by monotypy].

Aneure Nees, 1834: 194 [Type species *Aneure nuda* Nees, designated by Gahan and Fagan, 1923: 12. Synonymy by Westwood, 1839: 74].

Heptocondyla Rondani, 1877: 182 [Type species *Heptocondyla unicolor* Rondani, by monotypy. Synonymy by Bouček, 1974: 252, 279].

Cyclopleura Cameron, 1913: 96 [Type species *Cyclopleura fumipennis* Cameron (*Elasmus cameroni* Verma and Hayat as replacement name), designated by Gahan and Fagan, 1923: 41. Synonymy by Waterston, in Mahdihasan, 1925].

Austelasmus Riek, 1967: 148 [Type species *Elasmus trifasciiventris* Girault, by original designation. Synonymy by Burks, in Krombein et al., 1979: 1020].

Elasmus alami Verma and Hayat, 2002

Elasmus alami Verma and Hayat, 2002: 271-272, ♀. Holotype ♀: India, Uttar Pradesh, Aligarh (BMNH).

Distribution: Kerala, Bihar, Uttar Pradesh, Odisha, West Bengal.

Host: *Philodonta modesta* Weise.

Elasmus alaris Narendran, 2008

Elasmus alaris Narendran, 2008 : 8-9, ♀. Holotype ♀: India, Kerala, Palghat (ZSIC).

Distribution: Kerala.

Host: Unknown.

Elasmus albopictus Crawford, 1910

Elasmus albopictus Crawford, 1910: 132, ♀♀. Type ♀: Philippine Islands, Manila (USNM).

Distribution: Uttar Pradesh, West Bengal.

Host: *Tryporyza incertulus* on Paddy, *Eucosma critica* Meyrick, *Cnaphalocrosis medinalis* Guenee.

Elasmus anamalaianus Mani and Saraswat, 1972

Elasmus anamalaianus Mani and Saraswat, 1972: 461-462, ♀. Holotype ♀: India, Annamalai Hills (USNM).

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Distribution: Karnataka, Tamil Nadu.

Host: Unknown.

***Elasmus anticles* Walker, 1846**

Elasmus anticles Walker, 1846: 181, ♀. Type ♀: India, Mumbai (=Bombay) (BMNH).

Elasmus albomaculatus Gahan, 1920: 347, ♀. Holotype ♀: Philippines, Manila, Luzon (USNM). Synonymy by Kerrich, 1970: 89-91.

Elasmus ricinus Husain and Kudeshia, 1984: 363-365, ♀: India, Aligarh (Type lost?). Synonymy by Narendran et al., 2008: 15.

Distribution: Kerala, Karnataka, Tamil Nadu, Uttarakhand, Uttar Pradesh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha.

Host: *Apanteles malevolus* Rolston through *Hyblaea puera* Cramer, *Bracon* sp. and *Cheionus* sp. through *Epicephala pulcherrima* (Linn.) in Philippines. *Inglisia bivalvata* Green (Coccidae) on Sandalwood.

***Elasmus bathyskius* Narendran, 2008**

Elasmus bathyskius Narendran, 2008: 8, ♂, ♀. Holotype ♀: India, Kerala, Kottayam (ZSIC).

Distribution: Kerala, Odisha.

Host: Unknown.

***Elasmus binocellatus* Mani and Saraswat, 1972**

Elasmus binocellatus Mani and Saraswat, 1972: 462-463, ♀. Holotype ♀: India, Nilgiri Hills (USNM).

Distribution: Kerala, Tamil Nadu, Uttar Pradesh, Rajasthan, Delhi.

Host: Unknown.

***Elasmus brevicornis* Gahan, 1922**

Elasmus brevicornis Gahan, 1922: 50, ♂, ♀. Type ♀: Indonesia, Java, Buitenzora (USNM).

Distribution: Kerala, Tamil Nadu, Andhra Pradesh, Goa, Maharashtra, Delhi, Madhya Pradesh, Odisha, Punjab, Uttarakhand, Uttar Pradesh, Rajasthan, West Bengal, Chhattisgarh, Assam, Haryana, Gujarat.

Host: *Biloba subsecivela*; *Cnaphalocrocis medinalis*; *Diaphania indica*; *Hapalia machaeralis* on *Tectona grandis*; *Lamprosema indicata*; *Lygropia quarternalis* defoliating *Helictares isora*; *Marasma suspicalis*; *Nausinoe geometralis*. Braconid, *Apanteles machaeralis*.

***Elasmus caligneus* Narendran, 2008**

Elasmus caligneus Narendran, 2008: 10, ♀. Holotype ♀: India, Kerala, Malappuram, Chandakunnu (ZSIC).

Distribution: Kerala, West Bengal.

Host: Unknown.

***Elasmus cameroni* Verma and Hayat, 2002**

Cyclopleura fumipennis Cameron, 1913: 97, ♀. Lectotype ♀: Borneo, Kuching (BMNH). Preoccupied in *Elasmus* by *fumipennis* Thomson, 1878.

Elasmus fumipennis (Cameron): Ferriere, 1929: 416.

Elasmus cameronii Verma and Hayat, 1986: 174. Replacement name for *fumipennis* Cameron not Thomson.

Distribution: Kerala, Karnataka.

Host: parasite of Lac and Sal.

***Elasmus cavicolous* Verma and Hayat, 2002**

Elasmus cavicolous Verma and Hayat, 2002: 285-286, ♀. Holotype ♀: India, Maharashtra (BMNH).

Distribution: Maharashtra, Madhya Pradesh, Uttarakhand.

Host: Unknown.

***Elasmus ceylonicus* Ferriere, 1929**

Elasmus ceylonicus Ferriere, 1929: 418, ♀. Lectotype ♀: Sri Lanka, Pelmadulla (BMNH).

Distribution: Kerala, Karnataka, Tamil Nadu.

Host: *Psyche albipes* Moore.

***Elasmus claripennis* (Cameron), 1913**

Cyclopleura claripennis Cameron, 1913: 92, ♀. Type ♀: India, Dehradun (BMNH).

Elasmus colemani Madhihassan, 1923: 69, ♀. Type ♀: India, Bangalore (?). Synonymy by Ferriere, 1928: 171.

Elasmus claripennis (Cameron): Ferriere, 1928: 171-172.

Distribution: Andhra Pradesh, Jharkhand, Karnataka, Odisha, Uttarakhand, Uttar Pradesh.

Host: *Cnaphalocrosis medinalis* Guenee; *Eublemma amabilis* Moore parasitic on *Kerria lacca* Kerr.; *Eublemma scitula*; *Holocera pulveria* Meyr. On lac; bred from lac *Pelopidas mathias* Fab.

***Elasmus cyanomontanus* Mani and Saraswat, 1972**

Elasmus cyanomontanus Mani and Saraswat, 1972: 464, ♂. Holotype ♂: India, Nilgiri Hills (USNM).

Distribution: Tamil Nadu.

Host: Unknown.

***Elasmus dalhousieanus* Mani and Saraswat, 1972**

Elasmus dalhousieanus Mani and Saraswat, 1972: 465-467, ♂. Holotype ♂: India, Dalhousie (USNM).

Distribution: Himachal Pradesh.

Host: Unknown.

***Elasmus deccanus* Mani and Saraswat, 1972**

Elasmus deccanus Mani and Saraswat, 1972: 467-468, ♂. Holotype ♂: India, Pune (USNM).

Distribution: Maharashtra.

Host: Unknown.

***Elasmus dexotus* Narendran, 2008**

Elasmus dexotus Narendran, 2008: 6-7, ♀. Holotype ♀: India, Kerala, Wayanad, Kalpetta (ZSIC).

Distribution: Kerala.

Host: Unknown.

***Elasmus dubiatus* Narendran, 2008**

Elasmus dubiatus Narendran, 2008: 6, ♀. Holotype ♀: India, Kerala, Calicut Univ. campus (ZSIC).

Distribution: Kerala.

Host: Unknown.

***Elasmus flavescens* Verma and Hayat, 2002**

Elasmus flavescens Verma and Hayat, 2002: 284-285, ♀. Holotype ♀: India, Karnataka (BMNH).

Distribution: Kerala, Karnataka, Maharashtra.

Host: Unknown.

***Elasmus flavocarpus* Husain and Kudeshia, 1984**

Elasmus flavocarpus Husain and Kudeshia, 1984: 28, ♀. Holotype ♀: India, Aligarh (Not found in ZDAMU).

Distribution: Kerala, Delhi, Uttar Pradesh, Himachal Pradesh.

Host: Cocoons of *Apanteles* sp. on *Ricinus communis* L.

***Elasmus fulvicornis* Verma and Hayat, 2002**

Elasmus fulvicornis Verma and Hayat, 2002: 286-287, ♀. Holotype ♀: India, Uttar Pradesh, Aligarh (BMNH).

Distribution: Uttar Pradesh, West Bengal.

Host: Unknown.

***Elasmus grimmi* Girault, 1920**

Elasmus grimmi Girault, 1920: 186, ♀. Holotype ♀: Australia, Locality not given (QMB).

Austelasmus grimmi (Girault): Riek, 1967:148.

Distribution: Tamil Nadu, Karnataka, Kerala, Uttar Pradesh, Rajasthan.

Host: Unknown.

***Elasmus homonae* Ferriere, 1929**

Elasmus homonae Ferriere, 1929: 415-416, ♀, ♂. Lectotype ♀: Sri Lanka (BMNH).

Distribution: Kerala, Tamil Nadu, Uttar Pradesh.

Host: *Cydia leucostoma* Meyrick; *C. tricentra* Meyrick; *Homona coffearia* Nietn.

***Elasmus hustoni* Ferriere, 1929**

Elasmus hustoni Ferriere, 1929: 412, ♀. Lectotype ♀: Sri Lanka, Pelmadulla (BMNH).

Austelasmus hustoni (Ferriere): Reick, 1967: 148.

Distribution: Kerala, Karnataka.

Host: Bagworm (*Psyche albipes* Moore).

***Elasmus hyblaeae* Ferriere, 1929**

Elasmus hyblaeae Ferriere, 1929: 414, ♀. Type ♀, India, Arvallica, Nilambur (BMNH).

Elasmus nigricus Hussain and Kudeshia, 1984: 365, ♀. Holotype ♀: India, Aligarh (Type lost). Synonymy by Narendran et. al., 2008: 13.

Distribution: Kerala, Tamil Nadu, West Bengal, Madhya Pradesh, Meghalaya, Assam, Odisha, Uttar Pradesh, Andhra Pradesh, Uttarakhand.

Host: *Hyblaea puera*; *Noorda moringa*.

***Elasmus indicoides* Mani and Saraswat, 1972**

Elasmus indicoides Mani and Saraswat, 1972: 460, ♀. Holotype ♀: India, Annamalai Hills (USNM).

Elasmus nigricorpus Hussain and Kudeshia, 1984: 27-28, ♀. Holotype ♀: India, Aligarh (Type lost). Synonymy by Narendran et. al., 2008: 15.

Distribution: Kerala, Tamil Nadu.

Host: *Apanteles* sp. on *Ricinus communis* L.

***Elasmus indicus* Rohwer, 1921**

Elasmus indicus Rohwer, 1921: 123-124, ♀, ♂. Holotype ♀: India, Coimbatore (USNM).

Distribution: Karnataka, Maharashtra, Tamil Nadu, Uttarakhand, Gujarat.

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Host: *Anomalococcus* sp.; *A. indicus*; coccids on *Acacia* sp. *Diaphania* (*Margaronia*) *indica*; *Lamprosema indicate*; *Eublemma* sp. predaceous on *A. indicus*; probably parasitic on larvae of *Eublemma* sp.; *Sylepta derogate*.

***Elasmus johnstoni* Ferriere, 1929**

Elasmus johnstoni Ferriere, 1929: 258, ♀, ♂. Type ♀: Sudan, Wad Medani (BMNH).

Elasmus valparaicus Mani and Saraswat, 1972: 481, ♀. Holotype ♀: India, Valparai (USNM). Synonymy by Narendran et al., 2008: 12.

Distribution: Madhya Pradesh, Maharashtra, Haryana, Jharkhand, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh, Chhattisgarh, Punjab, West Bengal.

Host: *Earias insulana*; *E. cupreoviridis*; *E. fabia*; *Hapalia machaeralis*; *Hyblaea puera*; *Nephanteryx rhodobasalis*; *Pectinophora gossypiella*; *Sylepta derogate*. Braconidae: *Apanteles impartunus*; *A. machaeralis*; *A. malevolus*.

***Elasmus khandalus* Mani and Saraswat, 1972**

Elasmus khandalus Mani and Saraswat, 1972: 471-472, ♀. Holotype ♀: India, Khandala (USNM).

Distribution: Kerala, Maharashtra, West Bengal, Rajasthan.

Host: Unknown.

***Elasmus kodaianus* Mani and Saraswat, 1972**

Elasmus kodaianus Mani and Saraswat, 1972: 472, ♂. Holotype ♂: India, Kodaikanal (USNM).

Distribution: Tamil Nadu.

Host: Unknown.

***Elasmus kollimalaianus* Mani and Saraswat, 1972**

Elasmus kollimalaianus Mani and Saraswat, 1972: 473-474, ♀. Holotype ♀: India, Kollimalai Hills (USNM).

Distribution: Kerala, Tamil Nadu, West Bengal.

Host: Unknown.

***Elasmus krishnagiriensis* Mani and Saraswat, 1972**

Elasmus kollimalaianus Mani and Saraswat, 1972: 474-475, ♀. Holotype ♀: India, Mumbai (=Bombay) Krishnagiri (USNM).

Distribution: Kerala, Meghalaya.

Host: Unknown.

***Elasmus longicornis* Verma and Hayat, 2002**

Elasmus longicornis Verma and Hayat, 2002: 276-277, ♀. Holotype ♀: India, Kerala, Periyar Animal Sanctuary (BMNH).

Distribution: Kerala.

Host: Unknown.

***Elasmus longiventris* Verma and Hayat, 2002**

Elasmus longiventris Verma and Hayat, 2002: 277-278, ♀. Holotype ♀: India, Kerala, Periyar Animal Sanctuary (BMNH).

Distribution: Kerala, West Bengal, Uttar Pradesh.

Host: Unknown.

***Elasmus lutens* Crawford, 1914**

Elasmus lutens Crawford, 1914: 461-462, ♀. Holotype ♀: Philippines, Luzon, Manila (USNM).

Distribution: Madhya Pradesh.

Host: Unknown.

***Elasmus mahabalii* Mani and Saraswat, 1972**

Elasmus mahabalii Mani and Saraswat, 1972: 477, ♀. Holotype ♀: India, Mahabalipuram (USNM).

Distribution: Kerala, Karnataka, Maharashtra, Tamil Nadu.

Host: Unknown.

***Elasmus munnarus* Mani and Saraswat, 1972**

Elasmus munnarus Mani and Saraswat, 1972: 478-479, ♀. Holotype ♀: India, Munnar (USNM).

Distribution: Kerala, Tamil Nadu.

Host: Unknown.

***Elasmus neoflavescens* Narendran, 2008**

Elasmus neoflavescens Narendran, 2008: 7-8, ♀. Holotype ♀: India, Kerala, Thiruvananthapuram (ZSIC).

Distribution: Kerala.

Host: Unknown.

***Elasmus neoflavocorpus* Narendran and Hema, 2008**

Elasmus neoflavocorpus Narendran, 2008: 9, ♀. Holotype ♀: India, Kerala, Alappuzha, (ZSIC).

Distribution: Kerala, Chhattisgarh, Odisha, Uttar Pradesh.

Host: Unknown.

***Elasmus neopunctulatus* Narendran, 2008**

Elasmus neopunctulatus Narendran, 2008: 11, ♀. Holotype ♀: India, Kerala, Palghat (ZSIC).

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Distribution: Kerala.

Host: Unknown.

***Elasmus nephantidis* Rohwer, 1921**

Elasmus nephantidis Rohwer, 1921: 123, ♀. Holotype ♀: India, Coimbatore (USNM).

Distribution: Kerala, Tamil Nadu.

Host: *Opisina arenosella* Walker.

***Elasmus nigrinus* Verma and Hayat, 2002**

Elasmus nigrinus Verma and Hayat, 2002: 252-253, ♀. Holotype ♀: India, Tamil Nadu, Coimbatore (BMNH).

Distribution: Kerala, Tamil Nadu.

Host: Unknown.

***Elasmus noyesi* Verma and Hayat, 2002**

Elasmus noyesi Verma and Hayat, 2002: 258-259, ♀. Holotype ♀: India, Karnataka, Mudigere (BMNH).

Distribution: Kerala, Karnataka, Uttar Pradesh.

Host: Unknown.

***Elasmus nuperus* Narendran, 2008**

Elasmus nuperus Narendran, 2008: 5-6, ♀. Holotype ♀: India, Kerala, Calicut (ZSIC).

Distribution: Kerala.

Host: Unknown.

***Elasmus philippinensis* Ashmead, 1904**

Elasmus philippinensis Ashmead, 1904: 138, ♀. ♂. Holotype ♀: Philippine, Manila (USNM).

Distribution: Madhya Pradesh.

Host: *Sylepta derogata* Fab.

***Elasmus pletyedrae* Ferriere, 1935**

Elasmus pletyedrae Ferriere, 1935: 368-370, ♂. ♀. Type ♀: Egypt, Giza (BMNH).

Elasmus elongates Ferriere, 1947: 579- 580, M. ♂. Type ♀: France (BMNH).
Synonymy by Graham, 1995: 14.

Distribution: Maharashtra.

Host: *Pectinophora gossypiella*

***Elasmus polistis* Burk, 1971**

Elasmus polistis Burk, 1971: 195-196, ♀. ♂. Holotype ♀: Georgia, Madison Co. (USNM).

Distribution: Punjab.

Host: *Polistes annularis* (L.)

***Elasmus pulchellus* Verma and Hayat, 2002**

Elasmus pulchellus Verma and Hayat, 2002: 274-275, ♀. Holotype ♀: India, Uttar Pradesh, Aligarh (BMNH).

Distribution: Kerala, Karnataka, Uttar Pradesh.

Host: Unknown.

***Elasmus punctulatus* Verma and Hayat, 2002**

Elasmus punctulatus Verma and Hayat, 2002: 267-268, ♀. Holotype ♀: India, Tamil Nadu, Muthumalai (BMNH).

Distribution: Kerala, Karnataka, Maharashtra, Tamil Nadu.

Host: Unknown.

***Elasmus punensis* Mani and Saraswat, 1972**

Elasmus punensis Mani and Saraswat, 1972: 479, ♀. Holotype ♀: India, Pune, Khandakwasla Sinhagarh Fort (USNM).

Elasmus nigricoxa Prakash and Verma, 2012: 12-14, ♀. Holotype ♀: India, Uttar Pradesh, Bareilly (Type deposition ?) **Syn. Nov.**

Distribution: Kerala, Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Uttar Pradesh, Himachal Pradesh, Odisha, Uttarakhand, West Bengal.

Host: Unknown.

Remarks: The first author several time requested for type material to Ved Prakash but he did not reply. Based on the original description and line diagrams of *E. nigricoxa* by Prakash and Verma probably a junior synonym of *E. punensis* Mani and Saraswat.

***Elasmus queenslandicus* Girault, 1913**

Elasmus queenslandicus Girault, 1913: 82, ♀. Holotype ♀: Australia, Queensland, Kuranda (QMB). Synonyms given in Riek 1967: 159.

Distribution: Kerala, Karnataka, Tamil Nadu, Odisha, Uttar Pradesh, Uttarakhand, West Bengal, Jharkhand, Delhi, Chhattisgarh, Himachal Pradesh, Maharashtra.

Host: Unknown.

***Elasmus rajasthanicus* Verma and Hayat, 2002**

Elasmus rajasthanicus Verma and Hayat, 2002: 262-263, ♀. Type ♀: India: Rajasthan, Arnajee (ZSI).

Distribution: Kerala, Rajasthan, West Bengal.

Host: Unknown.

***Elasmus scutellofurvus* Narendran, 2008**

Elasmus scutellofurvus Narendran, 2008: 11-12, ♀. Holotype ♀: India, Kerala, Wayanad, Thariyodu (ZSIC).

Distribution: Kerala, Assam.

Host: Unknown.

***Elasmus sigillatus* Narendran, 2008**

Elasmus sigillatus Narendran, 2008: 10-11, ♀. Holotype ♀: India, Kerala, Malappuram, Calicut Univ. campus (ZSIC).

Distribution: Kerala.

Host: Unknown.

***Elasmus syleptae* Ferriere, 1929**

Elasmus syleptae Ferriere, 1929: 420, ♀. Holotype ♀: Africa, Nyasiland, Namiwara (BMNH).

Distribution: Kerala.

Host: *Sylepta derogata* Fab.

***Elasmus viridiscutellatus* Verma and Hayat, 2002**

Elasmus viridiscutellatus Verma and Hayat, 2002: 270-271, ♀. Holotype ♀: India, Maharashtra, Elephanta, Caves of Mumbai (BMNH).

Distribution: Andhra Pradesh, Bihar, Maharashtra, Tamil Nadu, West Bengal, Punjab, Assam, Odisha, Uttar Pradesh, Rajasthan.

Host: *Cnaphalocrosis medinalis*, larvae.

***Elasmus zehntneri* Ferriere, 1929**

Elasmus sp. Zehntner, 1900: 1 (by Ferriere, 1929).

Elasmus zehntneri Ferriere, 1929: 417, ♀, ♂. Type ♀: Indonesia, West Java (BMNH).

Elasmus mahabaleswarensis Mani and Saraswat, 1972: 475-476, ♀. Holotype ♀: India, Mahabaleswar (USNM). Synonymy by Narendran et al., 2008: 13.

Distribution: Kerala, Andhra Pradesh, Bihar, Delhi, Punjab, West Bengal, Karnataka, Tamil Nadu, Maharashtra.

Host: *Bissetia steniella*; *Chilo infuscatellus*; *Pectinophora gossypiella*; *Scirpophaga* sp. *S. auriflue*; *Tryporyza monostigma*; *T. novella*; *T. rhodoproctalis*.

***Elasmus zotonus* Narendran and Sheeba, 2008**

Elasmus zotonus Narendran and Sheeba, 2008: 5, ♀. Holotype ♀: India, Kerala, Kasaragod, CPCRI (ZSIC)

Distribution: Kerala.

Host: Unknown.

DISCUSSION

Out of 58 described Indian species of genus *Elasmus* Westwood three species namely *E. cyanomontanus* Mani and Saraswat, *E. dalhousieanus* Mani and Saraswat and *E. deccanus* Mani and Saraswat are based on males while another three species *E. philippinensis* Ashmead, *E. pletyedrae* Ferriere and *E. polistis* Burk are placed under 'species Insertae Sedis' because of lacking real identity (Mani and Saraswat, 1972; Narendran et al, 2008). Based on the original description and line diagrams *Elasmus nigricoxa* Prakash and Verma is probably a junior synonym of *Elasmus punensis* Mani and Saraswat.

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REFERENCES

- Ferriere, C., 1929, The Asiatic and African species of *Elasmus* Westwood (Hymenoptera: Chalcidoidea). *Bulletin of Entomological Research*, 20: 411-423.
- Gauthier, N., La Salle, J., Quicke, D. L. J., Godfray, H. C. J., 2000, Phylogeny of Eulophidae (Hymenoptera: Chalcidoidea), with a reclassification of Eulophinae and the recognition that Elasmidae are derived eulophids. *Systematic Entomology*, 25: 521-539.
- Girish Kumar, P., Kazmi, S. I., 2012, *Eulophidae and Eupelmidae (Insecta: Hymenoptera: Chalcidoidea) of Indian Thar Desert*. In: J. C. Grunwaldt et. al. (Eds.), *Deserts Fauna, Flora and Environment*. Nova Science Publishers, Inc. New York, U.S.A. 155-164.
- Graham, M. W. R. de V., 1995, European *Elasmus* (Hymenoptera: Chalcidoidea, Elasmidae) with a key and descriptions of five new species. *Entomologist's Monthly Magazine*, 131: 1-23.
- Kazmi, S. I., Girish Kumar, P., 2013, The species of *Elasmus* Westwood (Hymenoptera: Eulophidae: Eulophinae) from West Bengal, India. *Prommalia*, 1: 79-92.
- Kazmi, S. I., Girish Kumar, P., 2015, *Elasmus* Westwood (Hymenoptera: Chalcidoidea: Eulophidae: Eulophinae: Elasmidae) of Maharashtra, India. *Munis Entomology and Zoology*, 10(2): 460-467.
- Kazmi, S. I., Sheela, S., 2017, Record of *Elasmus* Westwood (Hymenoptera: Chalcidoidea: Eulophidae: Eulophinae: Elasmidae) of Punjab, India. *Munis Entomology and Zoology*, 12(1): 280-284.
- Kazmi, S. I., Sheela, S., Girish Kumar, P., 2008, The Species of *Elasmus* Westwood (Hymenoptera: Eulophidae: Eulophinae) from Uttar Pradesh, India. *Columban Journal of Life Science*, 9 (1, 2): 124-129.
- Khan, F. R., Hayat, M., 2011, Record of some species of *Elasmus* from India (Hymenoptera: Chalcidoidea: Eulophidae). *Bionotes*, 13(1): 7-10.
- Mani, M. S., 1989, Elasmidae. In: Director, Zoological Survey of India (Eds.). *Fauna of India. Chalcidoidea Part II: Zoological Survey of India, Government of India*: 1158-1205.
- Mani, M. S., Saraswat, G. G., 1972, On some *Elasmus* (Hymenoptera: Chalcidoidea) from India. *Oriental Insects*, 6: 459-506.

Annotated Checklist of Indian Elasmus

- Narendran, T. C., Sheeba, M., Kulkarni, H., 2008, A review on the taxonomy of the Indian species of *Elasmus* Westwood (Hymenoptera: Chalcidoidea: Eulophidae: Eulophinae: Elasmini). *Biospectra*, 3(1): 1-25.
- Noyes, J. S., 2016, Universal chalcidoidea database. <http://www.nhm.ac.uk/research-curation/projects/chalcidoidea/> Accessed: 14.09.2016.
- Prakash, V., Verma, M., 2012, Description on a new species of *Elasmus* Westwood (Hymenoptera: Chalcidoidea) with notes on host-parasitic relationship of some Indian species. *International Multidisciplinary Research Journal*, 2(11): 12-14.
- Riek, E. F., 1967, Australian Hymenoptera Chalcidoidea, family Eulophidae, subfamily Elasmidae. *Australian Journal of Zoology*, 15: 146-199.
- Verma, M. Hayat, M., 1985, Family Elasmidae, *In*: B. R. Subba Rao and M. Hayat (Eds), The Chalcidoidea (Insecta: Hymenoptera) of India and the adjacent countries. Part I. *Oriental Insects*, 19: 233-234.
- Verma, M., Hayat, M., 1986, Family Elasmidae. *In*: B. R. Subba Rao and M. Hayat (Eds), The Chalcidoidea (Insecta: Hymenoptera) of India and the adjacent countries. Part 2. *Oriental Insects*, 20: 173-178.
- Verma, M., Hayat, M., Kazmi, S. I., 2002, The species of *Elasmus* from India (Hymenoptera: Chalcidoidea: Eulophidae). *Oriental Insects*, 36: 245-306.

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